Appl. No. 10/658,165

Filing Date: September 9, 2003

Amdt. dated November 13, 2007

Reply to Office Action of August 15, 2007

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of characterizing the transfer of an analyte from a non-aqueous liquid composition to an aqueous medium, comprising the steps of:

- (a) providing a non-aqueous liquid composition comprising an analyte and a non-aqueous base;
- (b) combining the non-aqueous liquid composition with an aqueous dissolution medium so that the non-aqueous liquid composition contacts the aqueous dissolution medium;
- (c) agitating the non-aqueous liquid composition and the aqueous dissolution medium to form an emulsion; and
- (d) determining the amount of the analyte in the aqueous dissolution medium.
- 2. (Original) The method of claim 1, wherein in step (d) the amount of analyte in the aqueous dissolution medium is determined at more than one point in time.
- 3. (Original) The method of claim 1, further including a step of passing the aqueous dissolution medium, which is to be used for determining the amount of analyte in the aqueous dissolution medium, through a filter before determining the amount of analyte in the aqueous dissolution medium.
- 4. (Original) The method of claim 3, wherein the pore size of the filter ranges from about 0.1 to about 50 microns.
- 5. (Original) The method of claim 1, wherein the non-aqueous liquid composition is a pharmaceutical composition.
- 6. (Original) The method of claim 5, wherein the analyte is a pharmaceutically active component in the pharmaceutical composition.

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7. (Original) The method of claim 5, wherein the pharmaceutical composition is a sustained release dosage form.

- 8. (Original) The method of claim 5, wherein the pharmaceutical composition further contains pharmaceutically acceptable components.
- 9. (Previously presented) The method of claim 1, wherein the analyte is selected from the group consisting of ACE inhibitors; α -adrenergic agonists; β -adrenergic agonists; α -adrenergic blockers; β-adrenergic blockers (beta blockers); alcohol deterrents; aldose reductase inhibitors; aldosterone antagonists; amino acids; anabolics; analgesics (both narcotic and non-narcotic); anesthetics; anorexics; antacids; anthelmintics; antiacne agents; antiallergics; antiandrogens; antianginal agents; antianxiety agents; antiarrythmics; antiasthmatics; antibacterial agents and antibiotics; antialopecia and antibaldness agents; antiamebics; antibodies; anticholinergic drugs; anticoagulants and blood thinners; anticolitis drugs; anticonvulsants; anticystitis drugs; antidepressants; antidiabetic agents; antidiarrheals; antidiuretics; antidotes; antiemetics; antiestrogens; antiflatulents; antifungal agents; antigens; antiglaucoma agents; antihistaminics; antihyperactives; antihyperlipoproteinemics; antihypertensives; antihyperthyroid agents; antihypotensives; antihypothyroid agents; anti-infectives; anti-inflammatories (both steroidal and nonsteroidal); antimalarial agents; antimigraine agents; antineoplastics; antiobesity agents; antiparkinsonian agents and antidyskinetics; antipneumonia agents; antiprotozoal agents; antiprurities; antipsoriaties; antipsychotics; antipyreties; antirheumaties; antisecretory agents; anti-shock medications; antispasmodics; antithrombotics; antitumor agents; antitussives; antiulceratives; antiviral agents; anxiolytics; bactericidins; bone densifiers; bronchodilators; calcium channel blockers; carbonic anhydrase inhibitors; cardiotonics and heart stimulants; chemotherapeutics; choleretics; cholinergics; chronic fatigue syndrome medications; CNS stimulants; coagulants; contraceptives; cystic fibrosis medications; decongestants; diuretics; dopamine receptor agonists; dopamine receptor antagonists; enzymes; estrogens; expectorants; gastric hyperactivity medications;

glucocorticoids; hemostatics; HMG CoA reductase inhibitors; hormones; hypnotics;

immunomodulators; immunosuppressants; laxatives; medicaments for oral and

periodontal diseases; miotics; monoamine oxidase inhibitors; mucolytics; multiple

sclerosis medications; muscle relaxants; mydriatics; narcotic antagonists; NMDA

receptor antagonists; oligonucleotides; ophthalmic drugs; oxytocics; peptides.

polypeptides and proteins; polysaccharides; progestogens; prostaglandins; protease

inhibitors; respiratory stimulants; sedatives; serotonin uptake inhibitors; sex hormones

including androgens; smoking cessation drugs; smooth muscle relaxants; smooth muscle

stimulants; thrombolytics; tranquilizers; urinary acidifiers; urinary incontinence

medications; vasodilators; vasoprotectants; and combinations thereof.

10. (Original) The method of claim 1, wherein the analyte is a cephalosporin.

11. (Original) The method of claim 1, wherein the analyte is ceftiofur, a pharmaceutically

acceptable salt or derivative thereof.

12. (Original) The method of claim 1, wherein the non-aqueous base is a lipid.

13. (Original) The method of claim 12, wherein the non-aqueous base is an oil.

14. (Original) The method of claim 13, wherein the oil is selected from the group consisting of

canola oil, coconut oil, corn oil, peanut oil, sesame oil, olive oil, palm oil, safflower oil,

soybean oil, cottonseed oil, rapeseed oil, sunflower oil and mixtures thereof.

15. (Original) The method of claim 14, wherein the oil is cottonseed oil.

16. (Original) The method of claim 1, wherein the non-aqueous liquid composition is a

suspension, solution or emulsion.

17. (Original) The method of claim 1, wherein the non-aqueous liquid composition is a

suspension.

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18. (Original) The method of claim 1, wherein the agitation is conducted until from about 10%

to about 100% of the total amount of analyte, which was initially present in the non-

aqueous liquid composition, has been dissolved in the aqueous dissolution medium.

19. (Original) The method of claim 1, wherein the aqueous dissolution medium comprises a

buffer.

20. (Original) The method of claim 19, wherein the buffer is selected from the group consisting

of glycine buffer, citrate buffer, acetate buffer, phosphate buffer, and borate buffer.

21. (Currently amended) The method of claim 20, wherein the buffer has an optimal pH for

transfer of the analyte.

22. (Currently amended) The method of claim 1, wherein the aqueous dissolution medium has an

optimal pH for transfer of the analyte.

23. (Previously presented) The method of claim 1, wherein the aqueous dissolution medium is free

of surfactant.

24. (Previously presented) The method of claim 21, wherein the aqueous dissolution medium is

free of surfactant.

25. (Previously presented) The method of claim 22, wherein the aqueous dissolution medium is

free of surfactant.

26. (Previously presented) The method of claim 1, wherein the aqueous dissolution medium

comprises a surfactant.

27. (Previously presented) The method of claim 1, wherein the ratio of non-aqueous liquid

composition to aqueous dissolution medium by weight is from about 1:100 to about

1:2000.

28. (Previously presented) The method of claim 1, wherein step (c) is carried out on a shaker.

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29. (Previously presented) The method of claim 29 28, wherein the shaker is a reciprocating

shaker.

30. (Previously presented) The method of claim 29 28, wherein the shaker has a stroke rate of

from about 50 to about 400 cycles per minute.

31. (Previously presented) The method of claims 1 or 29 28 wherein in step (c) the non-aqueous

liquid composition and the aqueous dissolution medium are contained in a 40 mL EPA

type vial or a 50-100 mL serum type vial.

32. (Previously presented) The method of claim 8, wherein the pharmaceutically acceptable

component is selected from the group consisting of excipients, additives, suspending

agents, preservatives, wetting agents, thickeners, buffers, flocculating agents, flavoring

agents, sweeteners, colorants and fragrances.

33. (Previously presented) The method of claim 10, wherein the cephalosporin is selected from the

group consisting of ceftiofur, cefepime, cefixime, cefoperazone, cefotaxime,

cefpodoxime, ceftazidime, ceftizoxime, ceftriaxone, moxalactam, and pharmaceutically

acceptable salts and derivatives thereof.

34. (Previously presented) The method of claim 1 wherein the aqueous dissolution medium is

selected from the group consisting of water, a hydrochloric acid solution, a simulated

gastric fluid, a buffer solution, a simulated intestinal fluid, water containing a surfactant,

a buffer solution containing a surfactant, and an aqueous alcoholic solution.

35. (Previously presented) The method of claim 1 wherein the non-aqueous liquid composition is

a suspension, solution, or dispersion.

36. (Previously presented) The method of claim 1 provided that the non-aqueous liquid

composition is not an emulsion.

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37. (Previously presented) A method of predicting the *in vivo* performance of a non-aqueous

pharmaceutical composition comprising an analyte, said method comprising the step of

characterizing the transfer of the analyte from the composition to an aqueous medium

according to the method of claim 1.

38. (Previously presented) A method of commercially producing and releasing a non-aqueous

pharmaceutical composition comprising an analyte for public use, comprising the steps

of:

(a) preparing the non-aqueous pharmaceutical composition;

(b) characterizing the transfer of the analyte from the composition to an aqueous medium

according to the method of claim 1; and

(c) confirming that the result from step (b) falls within desired standards.

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